

# Mineral Industry Surveys

**For information, contact:**

Lisa A. Corathers, Manganese Commodity Specialist  
 U.S. Geological Survey  
 989 National Center  
 Reston, VA 20192  
 Telephone: (703) 648-4973, Fax: (703) 648-7757  
 E-mail: lcorathers@usgs.gov

Elena M. Lita (Data)  
 Telephone: (703) 648-7967  
 Fax: (703) 648-7975  
 E-mail: elita@usgs.gov

**Internet:** <http://minerals.usgs.gov/minerals>

## MANGANESE IN JUNE 2006

On a gross-weight basis, reported consumption of manganese ore containing 35% or more manganese, exclusive of that consumed at iron and steel plants, was 33,200 metric tons (t) in June 2006, which was a 3% decrease compared with that in May 2006, according to the U.S. Geological Survey. Corresponding industry stocks of ore at the end of the month were 222,000 t, which was a 10% decrease from that of May 2006. These data include estimates for annual respondents on the basis of 2005 data. Domestic consumption of manganese ore during the second quarter of 2006 was about 100,000 t, which was a 17% increase from that of the first quarter 2006, and a 10% decrease

from that of the second quarter 2005. Domestic consumption during the first half of 2006 was 186,000 t, which was 11% lower than that of the first half of 2005.

The following comparisons of trade data were made on the basis of manganese content (table 1). The data for May 2006 tabulated in this report indicate that the total exports of 648 t were 5% lower than those of the prior month, owing to a decrease in exports of ferromanganese and silicomanganese. Manganese imports were 53,400 t, which was a decrease of 18% compared with those of April 2006. This decrease was primarily attributable to decreases in manganese ore imports.

### Ferroalloy Prices, manganese content

	High-carbon ferromanganese <sup>1</sup> (dollars per gross ton)	Medium-carbon ferromanganese <sup>1</sup> (cents per pound)	Silicomanganese <sup>1</sup> (cents per pound)	Manganese metal <sup>2</sup> (cents per pound)
June 1	830.00-860.00	65.00-67.00	37.00-40.00	72.00-74.00
June 8	850.00-910.00	66.00-68.00	37.00-40.00	72.00-74.00
June 15	920.00-1,025.00	66.00-69.00	38.00-40.00	72.00-74.00
June 22	1,000.00-1,050.00	70.00-73.00	39.00-41.00	74.00-77.00
June 29	1,000.00-1,075.00	70.00-73.00	45.00-47.00	74.00-77.00

### Ore Prices, dollars per metric ton unit, manganese content<sup>3</sup>

	44% Manganese Ore <sup>2</sup>	48% Manganese Ore <sup>2</sup>
June 1	1.85-1.95	2.30-2.40
June 8	1.85-1.95	2.30-2.40
June 15	1.85-1.95	2.30-2.40
June 22	1.85-1.95	2.30-2.40
June 29	1.85-1.95	2.30-2.40

<sup>1</sup>Source: Platts Metals Week, dealer import price.

<sup>2</sup>Source: Ryan's Notes, North American transaction price.

<sup>3</sup>To determine dollars per metric ton, multiply the manganese content percentage by the price.

TABLE 1  
SELECTED U.S. FOREIGN TRADE IN MANGANESE<sup>1</sup>

(Metric tons, manganese content)<sup>2</sup>

	Imports for consumption			Exports		
	Ore and dioxide	Ferroalloy and metal	Total	Ore	Ferroalloy and metal	Total
2005:						
May	16,500	47,400	64,000	364	1,380	1,740
January-May	126,000	203,000	329,000	3,200	5,440	8,640
2006:						
January	20,300	25,600	45,900	46	1,710	1,760
February	27,500	52,600	80,100	87	1,170	1,260
March	4,970	47,400	52,300	63	1,660	1,720
April	30,300	34,800	65,200	25	661	686
May	7,140	46,300	53,400	40	609	648
Total	90,200	207,000	297,000	261	5,810	6,070

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>As reported except as estimated for imports of manganese dioxide and manganese waste and scrap and for exports from gross weights.

Source: U.S. Census Bureau.

TABLE 2  
U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN MAY 2006<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>2</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>2</sup>
Australia	--	--	--	8,380	5,570	\$5,310,000
Canada	22	13	\$24,600	22	13	24,600
France	11	7	3,620	11	7	3,620
Georgia	9,940	7,160	6,840,000	16,900	11,800	11,400,000
Korea, Republic of	--	--	--	10,000	6,480	7,180,000
Mexico	1,500	981	1,050,000	6,730	4,410	4,650,000
Netherlands	--	--	--	21	13	24,000
Norway	4,690	2,860	5,310,000	33,700	20,600	29,800,000
South Africa	8,790	5,800	5,510,000	62,800	41,400	39,700,000
Total	24,900	16,800	18,700,000	139,000	90,200	98,200,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN MAY 2006<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>2</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>2</sup>
<b>Low carbon:</b>						
Canada	20	16	\$23,500	20	16	\$23,500
China	1,490	1,230	1,750,000	5,350	4,670	7,140,000
Japan	--	--	--	1,500	1,210	1,510,000
Korea, Republic of	--	--	--	6,310	5,150	6,090,000
Mexico	920	743	930,000	4,260	3,430	4,350,000
Norway	396	324	486,000	573	468	700,000
South Africa	180	162	237,000	1,620	1,490	2,370,000
Total, low carbon	3,010	2,470	3,430,000	19,600	16,400	22,200,000
<b>Medium carbon, (m.c.) 1%-2% C:</b>						
Brazil	1,530	1,220	1,450,000	1,540	1,230	1,480,000
Canada	39	30	41,200	39	30	41,200
China	1,790	1,500	1,670,000	1,790	1,500	1,670,000
Korea, Republic of	--	--	--	5,300	4,260	3,970,000
Mexico	1,620	1,300	1,050,000	7,350	5,870	5,750,000
Norway	860	707	997,000	860	707	997,000
South Africa	6,670	5,410	4,970,000	15,000	12,200	11,100,000
Total, m.c., 1%-2% C	12,500	10,200	10,200,000	31,800	25,800	25,100,000
<b>Medium carbon, 2%-4% C:</b>						
Brazil	--	--	--	19	14	19,300
Georgia	1,470	1,160	637,000	1,470	1,160	637,000
Total, m.c., 2%-4% C	1,470	1,160	637,000	1,490	1,170	657,000
<b>High carbon:</b>						
Australia	--	--	--	4,000	2,940	2,240,000
Brazil	1,510	1,200	823,000	4,510	3,560	2,220,000
Canada	--	--	--	97	58	61,200
China	--	--	--	20	18	28,600
France	--	--	--	1,500	1,170	764,000
Mexico	18	14	21,000	26	20	29,300
South Africa	13,900	10,800	8,250,000	68,500	53,000	36,700,000
Ukraine	124	95	70,800	124	95	70,800
Total, high carbon	15,600	12,100	9,170,000	78,700	60,900	42,100,000
Grand total	32,600	25,900	23,400,000	132,000	104,000	90,000,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE ORE (20% OR MORE Mn) IN MAY 2006<sup>1,2</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>3</sup>
<b>More than 20%, but less than 47% manganese:</b>						
Brazil	1,410	648	\$96,600	1,450	670	\$116,000
China	289	59	8,800	1,220	360	62,900
Mexico	2,950	1,030	353,000	2,950	1,030	353,000
Total	4,640	1,740	459,000	5,610	2,060	532,000
<b>47% or more manganese:</b>						
Australia	--	--	--	11,100	5,650	1,580,000
Belgium	34	25	29,700	144	102	120,000
Brazil	3,890	3,070	801,000	6,840	4,580	1,100,000
China	837	515	286,000	1,830	1,010	346,000
Gabon	--	--	--	134,000	68,700	13,400,000
Morocco	--	--	--	20	17	6,000
South Africa	5	5	12,300	5	5	12,300
Total	4,760	3,620	1,130,000	154,000	80,000	16,500,000
Grand total	9,400	5,360	1,590,000	160,000	82,100	17,100,000

-- Zero.

<sup>1</sup>Quantities for general imports and imports for consumption are identical.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>3</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE IN MAY 2006<sup>1</sup>

(Metric tons, gross weight)

Source	Quantity	Customs value <sup>2</sup>	Year to date	
			Quantity	Customs value <sup>2</sup>
Australia	1,320	\$1,860,000	2,480	\$3,410,000
Belgium	38	76,600	331	799,000
Brazil	6	9,830	77	60,100
China	745	794,000	7,710	8,230,000
Colombia	--	--	8	14,400
France	--	--	3	29,400
Germany	--	--	23	116,000
Japan	869	1,250,000	2,670	3,730,000
Mexico	--	--	150	183,000
United Kingdom	--	--	(3)	11,300
Total	2,980	3,990,000	13,500	16,600,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN MAY 2006<sup>1</sup>

(Metric tons)

Source	Gross weight	Customs value <sup>2</sup>	Year to date	
			Gross weight	Customs value <sup>2</sup>
<b>Unwrought flake:</b>				
China	2,370	\$2,990,000	4,790	\$6,320,000
South Africa	76	105,000	2,100	3,490,000
Total	2,440	3,090,000	6,880	9,810,000
<b>Unwrought powder:</b>				
China	120	103,000	999	1,260,000
South Africa	394	713,000	1,480	2,680,000
Total	514	816,000	2,480	3,930,000
<b>Unwrought, other:</b>				
China	301	498,000	498	808,000
Germany	36	68,400	352	654,000
South Africa	120	211,000	700	1,200,000
Spain	--	--	408	696,000
Total	457	778,000	1,960	3,360,000
<b>Other manganese, wrought:</b>				
Brazil	--	--	294	210,000
China	20	28,200	346	447,000
France	--	--	11	109,000
Jamaica	--	--	( <sup>3</sup> )	3,000
Mexico	--	--	19	22,900
Netherlands	3	6,610	15	30,800
Total	23	34,800	685	823,000
Grand total	3,430	4,720,000	12,000	17,900,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

<sup>3</sup>Less than 1/2 unit.

Note: Imports for consumption of metallic manganese waste and scrap totaled 148 tons, all of which was from Canada, to give a year-to-date total of 479 tons.

Source: U.S. Census Bureau.

TABLE 7  
U.S. EXPORTS OF MANGANESE ORE (20% OR MORE Mn), FERROMANGANESE,  
SILICOMANGANESE, AND MANGANESE METAL BY COUNTRIES OF DESTINATION IN MAY 2006<sup>1</sup>

(Metric tons, gross weight)

	Manganese ore		Ferromanganese, 2% or less C		Silicomanganese		Manganese metal <sup>2</sup>	
	May	Year to date	May	Year to date	May	Year to date	May	Year to date
Argentina	--	--	--	--	--	--	3	3
Australia	--	--	--	--	--	5	--	3
Belgium	--	--	--	--	--	--	--	740
Brazil	--	--	--	--	--	--	--	4
Canada	61	395	68	3,910	--	13	55	220
Chile	--	--	--	--	--	--	--	7
China	--	35	--	--	--	--	--	--
Colombia	--	--	--	--	--	--	6	7
Dominican Republic	--	9	--	--	--	--	--	--
France	--	--	--	--	--	--	40	45
Germany	19	21	--	--	--	--	43	82
Hong Kong	--	--	--	--	--	--	--	2
Indonesia	--	23	--	--	--	13	--	--
Japan	--	--	--	--	--	--	215	414
Korea, Republic of	--	--	--	--	--	--	--	(3)
Malaysia	--	--	--	--	--	--	--	3
Mexico	--	--	--	7	22	79	--	7
Netherlands	--	--	--	100	4	13	--	--
Poland	--	21	--	--	--	--	--	--
Portugal	--	--	--	--	--	--	--	2
Sweden	--	19	--	--	--	--	10	26
Trinidad and Tobago	--	--	--	--	--	--	--	1
Total	79	522	68	4,010	26	123	373	1,570

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes manganese-aluminum, some other alloys, and waste and scrap.

<sup>3</sup>Less than ½ unit.

Note: Exports of ferromanganese with more than 2% carbon totaled 208 tons, all of which 123 tons went to Canada, and 85 tons went to Mexico to give a year-to-date total of 1,250 tons.

Source: U.S. Census Bureau.

TABLE 8  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN MAY 2006, BY CLASS<sup>1</sup>

Class	Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>2</sup> (thousands)	Year to date		
				Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>2</sup> (thousands)
<b>Imports for consumption:</b>						
Manganese oxides other than dioxide	1,040	\$740	South Africa 655; \$221	3,200	\$2,840	China 1,350; \$1,770
Manganites, manganates, and other permanganates	8	17	Japan 8; \$17	16	34	Japan 16; \$34
Potassium permanganate	124	280	Czech Republic 56; \$121	424	936	Czech Republic 193; \$416
Sodium permanganate	--	--	--	16	8	China 16; \$8
Sulfates, basket category, including manganese sulfate	2,510	1,630	Mexico 1,570; \$826	21,900	12,500	China 11,100; \$5,000
<b>Exports:</b>						
Manganese dioxide	324	335	Canada 156; \$100	2,120	2,090	Canada 1,080; \$665
Manganese oxides other than dioxide	3,360	1,490	Canada 2,850; \$1,020	11,400	5,380	Canada 9,890; \$3,580
Manganites, manganates, and other permanganates	2	5	Canada 2; \$5	19	43	Canada 19; \$43
Potassium permanganate	86	269	Canada 24; \$65	1,130	2,860	Spain 695; \$1,510
Sodium permanganate	113	757	Spain 46; \$504	524	1,970	Spain 247; \$1,210
Sulfates, basket category, including manganese sulfate	2,470	1,570	Canada 1,880; \$772	9,480	6,610	Canada 7,100; \$3,330

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>For imports, Customs value; for exports, free alongside ship value.

Source: U.S. Census Bureau.